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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/695,346	10/28/2003	Rudolf J. Hofmeister	15436.253.67.1	5612
22913	7590	06/29/2004	EXAMINER	
WORKMAN NYDEGGER (F/K/A WORKMAN NYDEGGER & SEELEY) 60 EAST SOUTH TEMPLE 1000 EAGLE GATE TOWER SALT LAKE CITY, UT 84111			ZARROLI, MICHAEL C	
			ART UNIT	PAPER NUMBER
			2839	

DATE MAILED: 06/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/695,346	<b>Applicant(s)</b> HOFMEISTER ET AL.	
	<b>Examiner</b> Michael C. Zarroli	<b>Art Unit</b> 2839	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 May 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) 12-33 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some    \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Specification*

1. The abstract of the disclosure is objected to because it's almost word for word the same as claim 1. Correction is required. See MPEP § 608.01(b).

### *Claim Objections*

2. Claim 2 objected to because of the following informalities: There should be punctuation in line 2 after "at least one of." Appropriate correction is required.

### *Drawings*

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the spacer "thickness corresponding to" for example the male socket and the female interface must be shown or the feature(s) canceled from the claim 2. No new matter should be entered. **The spacer 140 does not look like its thickness is as thick as the male socket and female interface; figure 4E for example. The same drawing objection can be made for the support member in subsequent claims.**

Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled “Replacement Sheet” in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the ball grid array must be shown or the feature(s) canceled from claim 9. No new matter should be entered.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

6. Claims 2-5, 7 and, 9 rejected under 35 U.S.C. 112, second paragraph, as

being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "thickness corresponding to" in claims 2 and 4-5 is a relative term, which renders the claims indefinite. The term "thickness corresponding to" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The examiner is not sure if the spacer or support member has **about the same thickness** as for example the female electrical socket and the male interface. The examiner will interpret as such. See drawing objection above.

Claims 4 and 5 are also not understood because of the term "support member." Where is this term discussed in the specification? Where is it shown on the drawings? The examiner will interpret this term to be the same as the spacer.

Is there a mistake in claim 7? Shouldn't the "male electrical socket" in line 1 be female? The examiner will interpret as such.

Claim 9 recites the limitation "the printed circuit board" in line 2. There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country, in public use, or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1, 6-8 and, 10-11 rejected under 35 U.S.C. 102(b) as being anticipated by McKenna Olson et al.

McKenna Olson discloses an electrical adapter (title) comprising: a board (22) having first and second opposing planar surfaces (fig. 5); a male electrical socket (25) coupled to the first planar surface of the board (fig. 3), the male electrical socket adapted for temporary connection to a female electrical interface of a first electrical device; and a female electrical socket (26) coupled to the second planar surface of the board (fig. 3), the female electrical socket adapted for temporary

connection to a male electrical interface of a second electrical device, the board including electrical connectors (fig. 7) electrically coupling the male and female electrical sockets, wherein one of the first electrical device and the second electrical device is a tester (60 at fig. 6).

Regarding claims 6-7 (as best understood) and, 8 McKenna Olson discloses that the male electrical socket is keyed to prevent accidental insertion of a male electrical interface into the male electrical socket (figures 3, 5 & 6) and that the *female* electrical socket is keyed to prevent accidental insertion of a female electrical interface into the female electrical socket (figures 3, 5 & 6).

Regarding claim 11, McKenna Olson discloses that the board is a printed circuit board (col. 2 line 47).

Regarding claim 10, it is well settled that the presence of process limitations in product claims, which limitations do not otherwise distinguish the current article over the prior art, cannot impart patentability to that product. (*In re Johnson*, 157USPQ 670, 1968) also (*In re Thorpe*, 227USPQ 964, 1985) What structural limitations does the rating impart?

***Claim Rejections - 35 USC § 103***

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claim 9 rejected under 35 U.S.C. 103(a) as being unpatentable over McKenna Olson as applied to claim 1 above, and further in view of Momenpour et al.



McKenna Olson discloses pins (23) in the male electrical socket, which is in turn coupled to electrical connectors in the PCB (fig. 5). McKenna Olson does not disclose that these pins are coupled using a BGA.

Momenpour disclose that BGA (130, 135) is used to connect a PCB to an adapter connector.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use a BGA as taught by Momenpour to connect the pins of the male socket to the PCB. The motivation/suggestion for doing so would have been save space or allow for a pressing action during assembly.

***Allowable Subject Matter***

12. Claims 2-5 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

13. The following is a statement of reasons for the indication of allowable subject matter: **As best understood**, the spacer/support member (?) having a thickness about the same as either the male socket and female electrical interface or the female socket and male electrical interface.

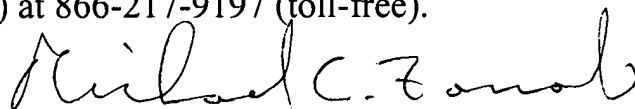
***Conclusion***

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Marui et al and Kuo teach a PCB with male and female connective sockets. Kubota et al teaches a spacer but it's not about the same thickness as the male socket and female interface. Attarian et al teaches a board with male and female sockets also a spacer but it's not as thick as for example the female socket and male interface. Lin et al teaches a board for a test adapter with male and female sockets. Murphy and Weiss et al teach a spacer but it's not as thick as for example the male connector socket and female interface.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael C. Zarroli whose telephone number is 571-272-2101. The examiner can normally be reached on 7:30 to 3:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne Feild can be reached on (571) 272-2800 ext 39. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Michael C. Zarroli  
Primary Examiner  
Art Unit 2839

MCZ  
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